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DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health

ACTION: Notice

SUMMARY: The inventions listed below are owned by an agency of the U.S.

Government and are available for licensing in the U.S. in accordance with 35 U.S.C. 209 and 37 CFR Part 404 to achieve expeditious commercialization of results of federally-funded research and development.

FOR FURTHER INFORMATION CONTACT: Licensing information may be obtained by emailing the indicated licensing contact at the National Heart, Lung, and Blood, Office of Technology Transfer and Development Office of Technology Transfer, 31 Center Drive Room 4A29, MSC2479, Bethesda, MD 20892-2479; telephone: 301-402-5579. A signed Confidential Disclosure Agreement may be required to receive any unpublished information.

SUPPLEMENTARY INFORMATION: Technology description follows.

Software for Fully Automating Myocardial Perfusion Quantification

Description of Technology:

Software is has been developed and available for licensing that fully automates image processing for the quantification of myocardial blood flow (MBF) pixel maps from first-pass contrast-enhanced cardiac magnetic resonance (CMR) perfusion images. The system removes the need for laborious manual quantitative CMR perfusion pixel map processing and can process prospective and retrospective studies acquired from various imaging protocols. In full automation, arterial input function (AIF) images are processed for motion correction and myocardial perfusion images are corrected for intensity bias. The corrected AIF images are processed for left ventricle signal detection and the corrected myocardial perfusion images are processed for myocardial signal detection. Both data sets are then corrected for nonlinear signaling, synchronized, and pixel-wise deconvolution processed. The resulting pixel map shows accurate myocardial blood flow.

Potential Commercial Applications:

- MRI Imaging of the myocardium
- Blood Perfusion Imaging

Development Stage:

- In vivo data
- Software system
- Source code

Inventors: Li-Yueh Hsu, Matthew Jacobs, Mitchel Benovoy, Andrew Arai

(NHLBI)

Intellectual Property: HHS Reference No. E-097-2016/0- Software Materials.

Licensing Contact: Michael Shmilovich, Esq, CLP; 301-435-5019;

shmilovm@mail.nih.gov

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Michael Shmilovich,
Senior Licensing and Patenting Manager,
National Heart, Lung, and Blood Institute,
Office of Technology Transfer and Development.
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